

Zinc

Test kit for the determination on zinc ions in surface water and sewage

Method:

Determination of zinc with zincon

Measurement range:

 0.5 - 3 mg/l Zn²⁺
Contents of test kit (*refill pack):

sufficient for 120 tests

16 ml Zn-1*

12 ml Zn-2*

27 ml Zn-3*

2 screw-plug measuring glasses

1 slide comparator

1 colour chart

1 plastic syringe 1 ml

1 instructions for use*

Hazard warning:

This test does not contain any hazardous substances in reportable quantities.

Procedure:
a) colorimetric determination with colour chart

also refer to the pictogram on the back of the colour chart

1. Pour a **1 ml** water sample into each of the measuring glasses using the plastic syringe.
Place a measuring glass on position A in the comparator.

Only add the reagent to measuring glass B.

2. Add **2 drops of Zn-1**, seal the glass and mix.
3. Add **2 drops of Zn-2**, seal the glass and mix.
4. Add **5 drops of Zn-3**, seal the glass and mix.
5. Open the glass after **1 min** and place it on position B in the comparator.
6. Slide the comparator until the colours match in the inspection hole on top. Check the measurement reading in the recess on the comparator reed. Mid-values can be estimated.
7. After use, rinse out both measuring glasses thoroughly and seal them.

b) photometric determination with photometer PF-11

Requisite accessories: reaction tubes 14 mm ID (Cat. No. 916 80)

Sample	Blank value
1. Rinse reaction tube 14 mm ID several times with sample and fill with 5 ml sample. 2. Add 5 drops Zn-1 , close and mix. 3. Add 5 drops Zn-2 , close and mix. 4. Add 10 drops Zn-3 , close and mix.	1. Fill reaction tube 14 mm ID with 5 ml sample.

Reaction time: 1'00 min

Measurement: Call up method **ECO ZINC**

Perform measurement

 The determination of zinc can be carried out by extinction measurement, if the method **ECO ZINC** is not programmed.

Schedule of values for photometer PF-11 (filter 5):

E (filter 5)	mg/l Zn ²⁺	E (filter 5)	mg/l Zn ²⁺	E (filter 5)	mg/l Zn ²⁺
0.102	0.1	0.359	0.8	0.776	2.0
0.140	0.2	0.433	1.0	0.842	2.2
0.177	0.3	0.501	1.2	0.907	2.4
0.214	0.4	0.571	1.4	0.972	2.6
0.251	0.5	0.640	1.6	1.037	2.8
0.287	0.6	0.707	1.8	1.103	3.0

After use, rinse out both reaction tubes thoroughly and seal them.

Interferences:

The following ions will not interfere:

 $\leq 1000 \text{ mg/l Cl}^-$; $\leq 500 \text{ mg/l Ca}^{2+}$, SO_4^{2-} ; $\leq 200 \text{ mg/l Cr(VI)}$, PO_4^{3-} ;

 $\leq 100 \text{ mg/l Mg}^{2+}$, Mo(VI) ; $\leq 10 \text{ mg/l Al}^{3+}$, Cu^{2+} , Ni^{2+} ; $\leq 5 \text{ mg/l Fe}^{3+}$;

 $\leq 0,5 \text{ mg/l Cd}^{2+}$, Pb^{2+} , Mn^{2+} ; $< 0,1 \text{ mg/l Cr(III)}$

The method can be applied also for the analysis of sea water after dilution (1+9).

Disposing of the samples:

The used analysis specimens can be flushed down the drain with tap water and channelled off to the local sewage treatment works.

Storage:

 Store the test kit in a cool ($< 25 \text{ }^\circ\text{C}$) and dry place.